

IN THE CLAIMS:

Rewrite the pending claims as follows:

1. (Previously presented) A computer-implemented method of querying number-range searches, comprising:

at a search engine having one or more processors and memory, the memory of the search engine storing one or more programs to be executed by the one or more processors of the search engine,

receiving a number-range search query having a number range, wherein the number range includes a boundary number;

generating an expression of numerical index terms based on the boundary number, wherein a respective numerical index term in the expression includes information indicative of an integral portion of a logarithm of the boundary number;

searching a document index of the search engine using the expression to identify one or more documents containing numbers that satisfy the expression; and

returning a result in accordance with at least a subset of the identified documents.

2. (Cancelled)

3. (Previously presented) The method of claim 1, wherein at least one numerical index term in the expression includes information indicating that a specified digit is a last non-zero digit of a respective number.

4. (Previously presented) The method of claim 1, wherein at least one numerical index term in the expression includes information indicative of a sign of a respective number.

5. (Previously presented) The method of claim 1, wherein at least one numerical index term in the expression includes information indicative of a number type associated with a respective number range.

6. (Previously presented) The method of claim 1, wherein the expression includes a plurality of numerical index terms that each correspond to a single respective digit of a respective number.

7-12. (Cancelled)

13. (Previously presented) A computer-readable medium having stored thereon instructions which, when executed by a processor, cause the processor to perform the operations of:

receiving a number-range search query having a number range, wherein the number range includes a boundary number;

generating an expression of numerical index terms based on the boundary number, wherein a respective numerical index term in the expression includes information indicative of an integral portion of a logarithm of the boundary number;

searching a document index using the expression to identify one or more documents containing numbers that satisfy the expression; and

returning a result in accordance with at least a subset of the identified documents.

14. (Cancelled)

15. (Previously presented) The computer-readable medium of claim 13, wherein at least one numerical index term in the expression includes information indicating that a specified digit is a last non-zero digit of a respective number.

16. (Previously presented) The computer-readable medium of claim 13, wherein at least one numerical index term in the expression includes information indicative of a sign of a respective number.

17. (Previously presented) The computer-readable medium of claim 13, wherein at least one numerical index term in the expression includes information indicative of a number type associated with a respective number range.

18. (Previously presented) The computer-readable medium of claim 13, wherein the expression includes a plurality of numerical index terms that each correspond to a single respective digit of a respective number.

19-24. (Cancelled)

25. (Previously presented) A search engine for querying number range searches, comprising:

one or more servers, each having one or more processors and memory, the memory of the one or more servers storing one or more programs to be executed by the one or more processors of the one or more servers, the one or more programs including:

a query encoder configured to receive a search query for a number range having a boundary number, wherein the query encoder is configured to generate an expression of numerical index terms based on the boundary number, and wherein a respective numerical index term in the expression includes information indicative of an integral portion of a logarithm of the boundary number; and

an index searcher coupled to the query encoder and configured to search a document index using the expression to identify one or more documents containing numbers that satisfy the expression and to return a result in accordance with at least a subset of the identified documents.

26. (Cancelled)

27. (Previously presented) The search engine of claim 25, wherein at least one numerical index term in the expression includes information indicating that a specified digit is a last non-zero digit of a respective number.

28. (Previously presented) The search engine of claim 25, wherein at least one numerical index term in the expression includes information indicative of a sign of a respective number.

29. (Previously presented) The search engine of claim 25, wherein at least one numerical index term in the expression includes information indicative of a number type associated with a respective number range.

30. (Previously presented) The search engine of claim 25, wherein the expression includes a plurality of numerical index terms that each correspond to a single respective digit of a respective number.

31-36. (Cancelled)

37. (Previously presented) The method of claim 6, wherein a respective numerical index term in the expression represents a respective digit of a respective number in base 10.

38. (Previously presented) The method of claim 37, wherein the respective numerical index term in the expression corresponds to the position of the respective digit within the respective number.

39. (Previously presented) The method of claim 1, wherein the integral portion of the logarithm of a respective boundary number is an integral portion of a base 10 logarithm of the respective boundary number.

40. (Previously presented) The method of claim 1, wherein a respective numerical index term in the expression includes information indicative of a mantissa of a respective number.

41. (Previously presented) The computer-readable medium of claim 18, wherein a respective numerical index term in the expression represents a respective digit of a respective number in base 10.

42. (Previously presented) The computer-readable medium of claim 41, wherein the respective numerical index term in the expression corresponds to a position of the respective digit within the respective number.

43. (Previously presented) The computer-readable medium of claim 13, wherein the integral portion of the logarithm of a respective boundary number is an integral portion of a base 10 logarithm of the respective boundary number.

44. (Previously presented) The computer-readable medium of claim 13, wherein a respective numerical index term in the expression includes information indicative of a mantissa of a respective number.

45. (Previously presented) The search engine of claim 30, wherein a respective numerical index term in the expression represents a respective digit of a respective number in base 10.

46. (Previously presented) The search engine of claim 45, wherein the respective numerical index term in the expression corresponds to a position of the respective digit within the respective number.

47. (Previously presented) The search engine of claim 25, wherein the integral portion of the logarithm of a respective boundary number is an integral portion of a base 10 logarithm of the respective boundary number.

48. (Previously presented) The search engine of claim 25, wherein a respective numerical index term in the expression includes information indicative of a mantissa of a respective number.